### Wastewater Management Program

# **On-sites Online**

September 15, 2006



For more information or additional copies of this document, contact:

Wastewater Management Program Washington State Department of Health PO Box 47824 Olympia, WA 98504-7825

Phone: (360) 236-3062 FAX: (360) 236-2257

Web: http://www.doh.wa.gov/wastewater.htm

Secretary of Health Mary Selecky

For persons with disabilities, this document is available upon request in other formats.

To submit a request, please call 1-888-586-9427 (TDD/TTY 1-800-833-6388).

Para personas discapacitadas, este documento está disponible a su pedido en otros

formatos.

Para hacer su pedido llame al 1-888-586-9427 (TDD/TTY 1-800-833-6388).

DOH Publication 334-015 9-15-2006

#### **Contents**

NTRODUCTION	5
HOMEOWNER EDUCATION	5
Additives	
Do's and Don'ts	
Emergencies	
Frequently asked questions	
General Information about How an On-site Septic System (OSS) works and how to maintain it	
Green Cleaning and Non-Hazardous Waste Cleaning Products	10
Inspecting Your Own System	
Landscaping an Onsite System	11
Pumping Your System	
Repairs to Your System	12
Soil and groundwater protection information	
Water Conservation	
DESCRIPTIONS OF SPECIFIC ON-SITE TECHNOLOGIES	13
Aerobic Treatment Unit (ATU)	14
Drainfield	
Mound	15
Pressure Distribution	15
Sand Filter	
Operation and Maintenance (O&M)	16
TECHNICAL ON-SITE INFORMATION	18
ORGANIZATIONS WITH ON-LINE INFORMATION ABOUT ON-SITE SEWAGE SYSTEMS	10

#### **NOTE:**

The presence of a product on this list does not constitute approval of marketing, advertising, or labeling practices employed by a manufacturer, nor is it an affirmation of manufacturer claims of product performance. Listing does not constitute endorsement of a product by the Washington State Department of Health. Information obtained from the sources listed is the sole responsibility of the manufacturer or other provider.

Links to external resources are provided as a public service, and do not imply endorsement by the Washington State Department of Health

#### Introduction

This list is a clearinghouse of online informational resources about on-site sewage systems. Some of this material has been developed by the local health jurisdictions of the twelve Puget Sound counties, and some by schools, government agencies and other professional organizations. It is intended to help the local health jurisdictions' efforts in sharing educational information and resources about on-site sewage systems. Please direct comments or suggestions to Lorna Larsen 360.236.3060 <a href="mailto:lorna.larsen@doh.wa.gov">lorna.larsen@doh.wa.gov</a>

#### **Homeowner Education**

Free "**Septic System Workshops**" – Thurston County <a href="http://www.co.thurston.wa.us/health/ehoss/workshops.html">http://www.co.thurston.wa.us/health/ehoss/workshops.html</a>

Free "**Septics 101 Clinics**" – Clallam County <a href="http://www.clallam.net/envhealth/html/os\_septics101.htm">http://www.clallam.net/envhealth/html/os\_septics101.htm</a>

"On-site Sewage System Bibliography" – Washington Sea Grant http://www.wsg.washington.edu/research/ecohealth/bibliography.html

"On-site Sewage Treatment and Disposal Information Tool Kit" – Washington Sea Grant homeowner and community education <a href="http://www.wsg.washington.edu/research/ecohealth/maintenance.html">http://www.wsg.washington.edu/research/ecohealth/maintenance.html</a>

"Small Community Wastewater Education" - University of Minnesota Extension walks small communities through the process of developing and implementing a wastewater management strategy <a href="http://septic.umn.edu/scwep/index.html">http://septic.umn.edu/scwep/index.html</a>

#### **Additives**

"Additives for Septic Systems, or Flushing Money Down the Toilet" – Clallam County and WSU, PDF flyer http://www.clallam.net/envhealth/assets/applets/additives.pdf

"List of Approved On-site Sewage Disposal System Additives" – DOH Wastewater Management Program (Approval is based on determination of not doing harm; approval must not be interpreted as certifying effectiveness, nor endorsing any additive products) <a href="http://www.doh.wa.gov/ehp/ts/ww/additives.doc">http://www.doh.wa.gov/ehp/ts/ww/additives.doc</a>

### Additives, (cont'd)

"Septic System Additives & Chemicals for Septic Tank and Drainfield "Maintenance," "Un-Clogging," or "Repair" - Septic Tank

**Treatments**" from The Home Inspection & Construction Information Website

http://www.inspect-ny.com/septic/septadds.htm

"Septic System Additives, The Other Side of the Story" – Jefferson County OSS additives advice

http://www.jeffersoncountypublichealth.org/index.php?id=169,229,0,0,1,0

"The Truth About Septic System Additives" – Kitsap County, PDF brochure

http://www.kitsapcountyhealth.com/environmenta\_health/water\_quality/docs/brochures\_oss\_additives.pdf

#### Do's and Don'ts

"Do's and Don't's of Septic Care" – Skagit County <a href="http://www.skagitcounty.net/Common/ASP/Default.asp?d=healthenvironmental&c=General&p=septiccare.htm">http://www.skagitcounty.net/Common/ASP/Default.asp?d=healthenvironmental&c=General&p=septiccare.htm</a>

"If You have a Water Treatment System – You may be Stressing Your Septic System!" - University of Rhode Island Cooperative information on how to handle backwash from potable water treatment units Extension <a href="http://www.uri.edu/ce/wq/owtc/html/owtc\_watertreatment.htm">http://www.uri.edu/ce/wq/owtc/html/owtc\_watertreatment.htm</a>

"Items to Avoid in an Onsite System" – NOWRA (National Onsite Wastewater Recycling Association)
<a href="http://www.nowra.org/?p=411">http://www.nowra.org/?p=411</a>

"Not in My Septic System!" – U.S. EPA, poster describing "cloggers" and "killers" of septic systems http://www.epa.gov/owm/septic/pubs/notinmysepticmagnet.pdf

"Things you should do to maintain your septic system" – King County <a href="http://www.metrokc.gov/HEALTH/wastewater/owners/dosanddonts.htm">http://www.metrokc.gov/HEALTH/wastewater/owners/dosanddonts.htm</a>

"What You Can Do To Extend the Life Of Your Septic System" - University of Rhode Island Cooperative Extension PDF file <a href="http://www.uri.edu/ce/wq/mtp/PDFs/SepticFactsheetslPDFs/extend%20the%20life.pdf">http://www.uri.edu/ce/wq/mtp/PDFs/SepticFactsheetslPDFs/extend%20the%20life.pdf</a>

### **Emergencies**

"Cleaning up a sewage spill" – DOH Emergency Preparedness http://www.doh.wa.gov/phepr/generalfactsheets/sewagespill.htm

"Disaster response: Septic tank systems during power outages or floods" – King County

http://www.metrokc.gov/HEALTH/disaster/septictanks.htm

"On-site Sewage Repair Process – What Do You Do When Your On-site Sewage System Has Failed?" - Kitsap County <a href="http://www.kitsapcountyhealth.com/environmenta\_health/onsite/repair\_process.htm">http://www.kitsapcountyhealth.com/environmenta\_health/onsite/repair\_process.htm</a>

"Septic Systems – What to Do after the Flood" – U.S. EPA <a href="http://www.epa.gov/safewater/faq/emerg\_septic.html">http://www.epa.gov/safewater/faq/emerg\_septic.html</a>

"Special conditions that can impact your septic system, such as wet weather or flooding, power outages, frequent or infrequent use" – Thurston County

http://www.co.thurston.wa.us/health/ehoss/special\_cond.html

"What to do during a power outage" – King County Wastewater Program

http://www.metrokc.gov/HEALTH/wastewater/owners/outage.htm

### Frequently asked questions

"Common questions about septic systems" – King County <a href="http://www.metrokc.gov/HEALTH/wastewater/owners/questions.htm">http://www.metrokc.gov/HEALTH/wastewater/owners/questions.htm</a>

"Frequently Asked Septic Questions" – Thurston County FAQ <a href="http://www.co.thurston.wa.us/health/ehoss/FAQs\_general.html">http://www.co.thurston.wa.us/health/ehoss/FAQs\_general.html</a>

"On-site Sewage System FAQs" – Jefferson County <a href="http://www.jeffersoncountypublichealth.org/index.php?id=96,0,0,1,0,0">http://www.jeffersoncountypublichealth.org/index.php?id=96,0,0,1,0,0</a>

"On-site Septic Systems Frequently Asked Questions" – Pierce County, PDF

http://www.tpchd.org/files/library/ba1b4a310469bd4f.pdf

"On-site Sewage Systems Program Frequently Asked Questions" – Whatcom County

http://www.co.whatcom.wa.us/health/environmental/sewage\_systems/sewage.jsp#FAQ

### Frequently asked questions (cont'd)

"Septic Systems Frequently Asked Questions" – U.S. EPA <a href="http://cfpub.epa.gov/owm/septic/faqs.cfm?program\_id=70">http://cfpub.epa.gov/owm/septic/faqs.cfm?program\_id=70</a>

# General Information about How an On-site Septic System (OSS) works and how to maintain it

"A Homeowner's Guide to Septic Systems" – U.S. EPA <a href="http://www.epa.gov/owm/septic/pubs/homeowner\_guide\_long.pdf">http://www.epa.gov/owm/septic/pubs/homeowner\_guide\_long.pdf</a>

"Basic Facts: On-site Sewage System" – Kitsap County OSS overview, PDF

http://www.kitsapcountyhealth.com/environmenta\_health/water\_quality/docs/brochures\_know\_your\_oss.pdf

"Basic Principles of Onsite Sewage" - Department of Health, PDF <a href="http://www.doh.wa.gov/ehp/ts/WW/BasicPrinciplesOn-SiteSewage.pdf">http://www.doh.wa.gov/ehp/ts/WW/BasicPrinciplesOn-SiteSewage.pdf</a>

"Decentralized Systems Technology Fact Sheet: Septic System Tank" – U.S. EPA OSS overview, PDF http://www.epa.gov/owm/septic/pubs/septic\_system\_tank.pdf

"Home Buyer's Detailed Guide to Septic Systems – Buying a Home With a Septic Tank" - The Home Inspection & Construction Information Website

http://www.inspect-ny.com/septic/buyguide.htm

"Homeowner's On-site System Guide" – National Onsite Wastewater Recycling Association (NOWRA) OSS overview <a href="http://www.nowra.org/?p=224">http://www.nowra.org/?p=224</a>

"How a septic system works" – King County OSS overview http://www.metrokc.gov/HEALTH/wastewater/owners/works.htm

"Information for Homeowners – Ten Simple Steps to keep your septic system working properly" – U.S. EPA http://cfpub.epa.gov/owm/septic/homeowners.cfm#steps

"Maintaining Your Septic System" – Clallam County OSS overview http://www.clallam.net/envhealth/html/os\_maintenance.htm

"Not in My Septic System!" – U.S. EPA, poster describing "cloggers" and "killers" of septic systems <a href="http://www.epa.gov/owm/septic/pubs/notinmysepticmagnet.pdf">http://www.epa.gov/owm/septic/pubs/notinmysepticmagnet.pdf</a>

#### **General Information**, on How Septic Systems Work (cont'd)

"On-site Out of Sight – On-site Sewage System Homeowner's Manual" with service record – Kitsap County PDF, 13 pages <a href="http://www.kitsapcountyhealth.com/environmenta\_health/onsite/docs/ommanual.pdf">http://www.kitsapcountyhealth.com/environmenta\_health/onsite/docs/ommanual.pdf</a>

"On-site Septic System Publications for Home Owners and Managers" – DOH, Wastewater Management, links to many on-site educational publications http://www.doh.wa.gov/ehp/ts/WW/pubs-ww-propertyowners.htm

"On-site Sewage Basics" – Kitsap County OSS overview <a href="http://www.kitsapcountyhealth.com/environmenta\_health/onsite/oss\_basics.htm">http://www.kitsapcountyhealth.com/environmenta\_health/onsite/oss\_basics.htm</a>

"Rate Your Septic System Knowledge" – Jefferson County, http://www.jeffersoncountypublichealth.org/index.php?id=169,230,0,0,1,0

"Septic Sense, Scents, Cents" – Washington Sea Grant OSS overview <a href="http://www.wsg.washington.edu/outreach/mas/water\_quality/septicsense/septicmain.html">http://www.wsg.washington.edu/outreach/mas/water\_quality/septicsense/septicmain.html</a>

"Septic System Approval" – for systems in Jefferson County http://www.jeffersoncountypublichealth.org/index.php?id=169,233,0,0,1,0

"Septic System Basics" – Thurston County OSS overview <a href="http://www.co.thurston.wa.us/health/ehoss/septic\_basics.html">http://www.co.thurston.wa.us/health/ehoss/septic\_basics.html</a>

"Septic System Information" – National Small Flows Clearinghouse (NSFC) OSS main page http://www.nesc.wvu.edu/nsfc/nsfc\_septicnews.htm

"Septic System Information for Homeowners" – U.S. EPA <a href="http://cfpub.epa.gov/owm/septic/homeowners.cfm">http://cfpub.epa.gov/owm/septic/homeowners.cfm</a>

"Septic System Myths and Truths" – Jefferson County http://www.jeffersoncountypublichealth.org/index.php?id=169,231,0,0,1,0

"Septic Systems - An Engineer's View" - The Home Inspection & Construction Information Website http://www.inspect-ny.com/septic/lockwood.htm

"Septic Tank Maintenance: What Can Be Flushed into a Septic Tank
- Septic Tank Maintenance and Cleaning Advice" - The Home
Inspection & Construction Information Website
<a href="http://www.inspect-ny.com/septic/dontflush.htm">http://www.inspect-ny.com/septic/dontflush.htm</a>

### **General Information** on How Septic Systems Work (cont'd)

"So Now You Own a Septic System" – National Small Flows Clearinghouse (NSFC, PDF brochure http://www.nesc.wvu.edu/nsfc/pdf/septic%20news/Septic\_Tank1.pdf

"The care and feeding of your septic system" – National Small Flows Clearinghouse, PDF brochure http://www.nesc.wvu.edu/nsfc/pdf/septic%20news/Septic Tank2.pdf

"Understanding and Caring for Your Septic Tank System" – WA State Department of Health, Wastewater Management Program, PDF brochure

http://www3.doh.wa.gov/here/materials/CRA\_Detail.aspx?ID=358

"Water Quality Guide - Septic Systems" – Washington State Dept. of Ecology

http://www.ecy.wa.gov/programs/wq/wqguide/septic.html

# **Green Cleaning and Non-Hazardous Waste Cleaning Products**

"Green Cleaning Kit" – Pierce County, PDF <a href="https://www.tpchd.org/files/library/81d45ec2a0e09801.pdf">https://www.tpchd.org/files/library/81d45ec2a0e09801.pdf</a>

"Green Cleaning Recipes" – Thurston County, PDF <a href="http://www.co.thurston.wa.us/health/ehrp/pdf/Green%20Cleaning%20Recipes%20for%20web.pdf">http://www.co.thurston.wa.us/health/ehrp/pdf/Green%20Cleaning%20Recipes%20for%20web.pdf</a>

### **Inspecting Your Own System**

"How to Find The Septic - tips on locating septic tanks for inspection and septic tank pumping" - The Home Inspection & Construction Information Website

http://www.inspect-ny.com/septic/septankfind.htm

"Inspecting your septic system – Protecting your investment" - King County, when and how to get your OSS professionally inspected and what to expect

http://www.metrokc.gov/HEALTH/wastewater/owners/inspections.htm

"Inspecting your tank – It's not so bad.....really!" – Thurston County, how to inspect your own septic tank http://www.co.thurston.wa.us/health/ehoss/inspect\_septic.html

### **Inspecting Your Own System** (cont'd)

"Measure Scum & Sludge – How and Why to Measure Septic Tank Scum and Sludge in the Septic Tank" - The Home Inspection & Construction Information Website

http://www.inspect-ny.com/septic/tankpump.htm#sludge

"Septic & Cesspool Safety - Septic System, Septic Tank, & Cesspool Safety Warnings for Septic Inspectors, Septic Pumpers, and Homeowners" - The Home Inspection & Construction Information Website

http://www.inspect-ny.com/septic/septicsafety.htm

"What to Look For During a Septic Inspection - Step by Step Diagnosis" - The Home Inspection & Construction Information Website <a href="http://www.inspect-ny.com/septic/fundamentals.htm">http://www.inspect-ny.com/septic/fundamentals.htm</a>

### **Landscaping an Onsite System**

"Landscaping Your Drainfield" – Clallam County <a href="http://www.clallam.net/EnvHealth/html/os\_landscape.htm">http://www.clallam.net/EnvHealth/html/os\_landscape.htm</a>

"Landscaping Your Drainfield" – Thurston County http://www.co.thurston.wa.us/health/ehoss/landscp.html

"Landscaping Your Drainfield, Are you unsure how to garden and care for it?" – Clallam County and Washington State University Extension (WSU), PDF, brochure <a href="http://www.clallam.net/EnvHealth/assets/applets/landscape.pdf">http://www.clallam.net/EnvHealth/assets/applets/landscape.pdf</a>

"Landscaping Your Septic System" – Washington Sea Grant, PDF, brochure

http://www.wsg.washington.edu/outreach/mas/water\_quality/septicsense/landscapeseptic.pdf

"Landscaping tips with a septic system" – King County http://www.metrokc.gov/HEALTH/wastewater/owners/landscaping.htm

**"Plant Suggestions for Drainfield Landscaping"** – Clallam County, PDF

http://www.clallam.net/envhealth/assets/applets/goodplants.pdf

### **Pumping Your System**

"Pumping Your Septic Tank" – Washington Sea Grant, PDF, brochure <a href="http://www.wsg.washington.edu/outreach/mas/water\_quality/septicsense/pumpseptic.pdf">http://www.wsg.washington.edu/outreach/mas/water\_quality/septicsense/pumpseptic.pdf</a>

"Septic Tank Pumping Guide: When, Why, How to Pump A Septic Tank" - The Home Inspection & Construction Information Website <a href="http://www.inspect-ny.com/septic/tankpump.htm">http://www.inspect-ny.com/septic/tankpump.htm</a>

"What To Expect During a Septic Tank Pump Out" - PDF file from the University of Rhode Island Cooperative Extension <a href="http://www.uri.edu/ce/wq/mtp/PDFs/SepticFactsheetslPDFs/PumpoutPgd.pdf">http://www.uri.edu/ce/wq/mtp/PDFs/SepticFactsheetslPDFs/PumpoutPgd.pdf</a>

"What to expect when the septic tank needs pumping" – King County http://www.metrokc.gov/HEALTH/wastewater/owners/pumping.htm

### Repairs to Your System

"Diagnosing Clogged Drains: Is it a blocked drain or the septic system? - A First Step for Homeowners" - The Home Inspection & Construction Information Website <a href="http://www.inspect-ny.com/septic/septicdiag1.htm">http://www.inspect-ny.com/septic/septicdiag1.htm</a>

"Five Signs of a Failing Septic System" – Tacoma-Pierce County, PDF poster and brochure https://www.tpchd.org/files/library/44da411748f8db3e.pdf

"On-site Sewage Repair Process – What Do You Do When Your On-site Sewage System Has Failed?" – Kitsap County <a href="http://www.kitsapcountyhealth.com/environmenta\_health/onsite/repair\_process.htm">http://www.kitsapcountyhealth.com/environmenta\_health/onsite/repair\_process.htm</a>

"Sewage System Repair – Resource Guide" – Kitsap County, PDF brochure: includes how to recognize a failing system, and what to do <a href="http://www.kitsapcountyhealth.com/environmenta\_health/water\_quality/docs/brochures\_oss\_repair.pdf">http://www.kitsapcountyhealth.com/environmenta\_health/water\_quality/docs/brochures\_oss\_repair.pdf</a>

### Soil and groundwater protection information

"Health Hazards Associated With Sewage System Failure" – Washington Sea Grant http://www.wsg.washington.edu/research/ecohealth/articles/hazards.html

### Soil and groundwater protection information (cont'd)

"Groundwater protection and your septic system" – National Small Flows Clearinghouse (NSFC)

http://www.nesc.wvu.edu/nsfc/pdf/septic%20news/Septic\_Tank3.pdf

"What's in Your Backyard? – University of Rhode Island Cooperative Extension

http://www.uri.edu/ce/wq/owtc/resources/whatsIn.pdf

#### **Water Conservation**

"Conserving Water Using Greywater" – DOH Wastewater Management Program <a href="http://www.doh.wa.gov/ehp/ts/WW/greywater/Greywater-1.htm">http://www.doh.wa.gov/ehp/ts/WW/greywater/Greywater-1.htm</a>

"How to Be Water Wise When You Have A Septic System" – King County interactive Web site with water conservation tips http://www.metrokc.gov/HEALTH/wastewater/owners/waterwise.htm

"Indoor Water Conservation" – Thurston County, PDF <a href="http://www.co.thurston.wa.us/health/ehoss/pdf/IndoorWaterConservation.pdf">http://www.co.thurston.wa.us/health/ehoss/pdf/IndoorWaterConservation.pdf</a>

"Indoor Water Conservation" – DOH Office of Drinking Water, water conservation guidelines, PDF, brochure <a href="http://www.doh.wa.gov/ehp/dw/Publications/331-120-1\_indoor\_water\_conservation.pdf">http://www.doh.wa.gov/ehp/dw/Publications/331-120-1\_indoor\_water\_conservation.pdf</a>

"Water Conserving On-site Wastewater Treatment Systems" – DOH Wastewater Management Program, Recommended Standards and Guidance (RS&G)
http://www.doh.wa.gov/ehp/ts/WW/WaterConservSystems-2000.pdf

### **Descriptions of Specific On-site Technologies**

"Homeowner's Manuals for On-Site Sewage Treatment and Disposal" – Washington Sea Grant <a href="http://www.wsg.washington.edu/research/ecohealth/septic.html">http://www.wsg.washington.edu/research/ecohealth/septic.html</a>

"Septic System Alternatives" – Jefferson County <a href="http://www.jeffersoncountypublichealth.org/index.php?id=169,232,0,0,1,0">http://www.jeffersoncountypublichealth.org/index.php?id=169,232,0,0,1,0</a>

"Septic System Types" – Thurston County <a href="http://www.co.thurston.wa.us/health/ehoss/septic\_types.html">http://www.co.thurston.wa.us/health/ehoss/septic\_types.html</a>

"Types of Septic Systems" – King County http://www.metrokc.gov/HEALTH/wastewater/owners/types.htm

### **Aerobic Treatment Unit (ATU)**

"Aerobic Treatment Units" – Kitsap County
<a href="http://www.kitsapcountyhealth.com/environmenta\_health/oandm/o\_and\_m\_atu.htm">http://www.kitsapcountyhealth.com/environmenta\_health/oandm/o\_and\_m\_atu.htm</a>

"Aerobic Treatment Units" – Thurston County <a href="http://www.co.thurston.wa.us/health/ehoss/atu.html">http://www.co.thurston.wa.us/health/ehoss/atu.html</a>

"Aerobic Treatment Units – Decentralized Systems Technology Fact Sheet" - U.S. EPA, PDF http://www.epa.gov/owm/septic/pubs/aerobic\_treatment.pdf

#### **Drainfield**

"Frequently Asked Septic Questions: Drainfield" – Thurston County <a href="http://www.co.thurston.wa.us/health/ehoss/FAQs\_drainfld.html">http://www.co.thurston.wa.us/health/ehoss/FAQs\_drainfld.html</a>

"How the drainfield works" – King County, video <a href="http://www.metrokc.gov/HEALTH/wastewater/owners/questions.htm#drainfield">http://www.metrokc.gov/HEALTH/wastewater/owners/questions.htm#drainfield</a>

"How the drainfield works" – Thurston County <a href="http://www.co.thurston.wa.us/health/ehoss/drainfield.html">http://www.co.thurston.wa.us/health/ehoss/drainfield.html</a>

"Locate your drainfield" – Thurston County http://www.co.thurston.wa.us/health/ehoss/locatedrain.html

"Septic System Drainfield Absorption System Biomat Formation - what leads to drain field clogging and expensive drainfield repairs" - The Home Inspection & Construction Information Website <a href="http://www.inspect-ny.com/septic/biomat.htm">http://www.inspect-ny.com/septic/biomat.htm</a>

"Septic Tank – Soil Absorption Systems – Decentralized Systems Technology Fact Sheet" - U.S. EPA, PDF, How the drainfield works <a href="http://www.epa.gov/owm/septic/pubs/septicfc.pdf">http://www.epa.gov/owm/septic/pubs/septicfc.pdf</a>

"The Perc Test" – Jefferson County, percolation test and soil information <a href="http://www.jeffersoncountypublichealth.org/index.php?id=169,234,0,0,1,0">http://www.jeffersoncountypublichealth.org/index.php?id=169,234,0,0,1,0</a>

#### Mound

"Homeowner's Manual For the Operation, Monitoring, and Maintenance of a Mound On-site Sewage Treatment and Disposal System" – Washington Sea Grant PDF

http://www.wsg.washington.edu/outreach/mas/water\_quality/onsite\_sewage\_treatment/mound.pdf

"Mound Systems" – Kitsap County

http://www.kitsapcountyhealth.com/environmenta\_health/oandm/o\_and\_m\_mounds.htm

"Mound Systems – Decentralized Systems Technology Fact Sheet" - U.S. EPA, PDF

http://www.epa.gov/owm/septic/pubs/mound.pdf

"Understanding and Caring for Your Mound System" – DOH, Wastewater Management Program, PDF, brochure <a href="http://www3.doh.wa.gov/here/materials/CRA\_Detail.aspx?ID=356">http://www3.doh.wa.gov/here/materials/CRA\_Detail.aspx?ID=356</a>

#### **Pressure Distribution**

"Homeowner's Manual for the Operation, Monitoring, and Maintenance of a Pressure Distribution On-site Sewage Treatment and Disposal System" – Washington Sea Grant PDF <a href="http://www.wsg.washington.edu/outreach/mas/water\_quality/onsite\_sewage\_treatment/pressure.pdf">http://www.wsg.washington.edu/outreach/mas/water\_quality/onsite\_sewage\_treatment/pressure.pdf</a>

"Pressure Distribution description" – Kitsap County <a href="http://www.kitsapcountyhealth.com/environmenta\_health/oandm/o\_and\_m\_pressure.htm">http://www.kitsapcountyhealth.com/environmenta\_health/oandm/o\_and\_m\_pressure.htm</a>

"Understanding and Caring for your Pressure Distribution System" – DOH, Wastewater Management Program, PDF, brochure <a href="http://www3.doh.wa.gov/here/materials/CRA\_Detail.aspx?ID=357">http://www3.doh.wa.gov/here/materials/CRA\_Detail.aspx?ID=357</a>

#### Sand Filter

"Intermittent Sand Filter description" – Kitsap County <a href="http://www.kitsapcountyhealth.com/environmenta\_health/oandm/o\_and\_m\_sandfilter.htm">http://www.kitsapcountyhealth.com/environmenta\_health/oandm/o\_and\_m\_sandfilter.htm</a>

### Sand Filter (cont'd)

"Homeowner's Manual For the Operation, Monitoring, and Maintenance of a Sand Filter On-site Sewage Treatment and Disposal System" Washington Sea Grant PDF

http://www.wsg.washington.edu/outreach/mas/water\_quality/onsite\_sewage\_treatment/sand.pdf

"Intermittent Sand Filters – Wastewater Technology Fact Sheet" – U.S. EPA, PDF

http://www.epa.gov/owm/septic/pubs/isf.pdf

"Recirculating Sand Filters – Decentralized Systems Technology Fact Sheet" – U.S. EPA, PDF

http://www.epa.gov/owm/septic/pubs/finalr\_7e6.pdf

"Understanding and Caring for Your Sand Filter System" – DOH, PDF, brochure

http://www3.doh.wa.gov/here/materials/CRA\_Detail.aspx?ID=378

### **Operation and Maintenance (O&M)**

"Homeowner Septic System Checklist" – U.S. EPA OSS Checklist and maintenance record, PDF

http://www.epa.gov/owm/septic/pubs/septic\_sticker.pdf

"Homeowner's Manual For the Operation, Monitoring, and Maintenance of a Gravity On-site Sewage Treatment and Disposal System" Washington Sea Grant PDF

http://www.wsg.washington.edu/outreach/mas/water\_quality/onsite\_sewage\_treatment/gravity.pdf

"Homeowner's Manual For the Operation, Monitoring, and Maintenance of a Mound On-site Sewage Treatment and Disposal System" – Washington Sea Grant PDF

http://www.wsg.washington.edu/outreach/mas/water\_quality/onsite\_sewage\_treatment/mound.pdf

"Homeowner's Manual for the Operation, Monitoring, and Maintenance of a Pressure Distribution On-site Sewage Treatment and Disposal System" – Washington Sea Grant PDF <a href="http://www.wsg.washington.edu/outreach/mas/water\_quality/onsite\_sewage\_treatment/pressure.pdf">http://www.wsg.washington.edu/outreach/mas/water\_quality/onsite\_sewage\_treatment/pressure.pdf</a>

Homeowner's Manual for the Operation, Monitoring, and Maintenance of a Proprietary Device On-site Sewage Treatment and Disposal System – Washington Sea Grant PDF

http://www.wsg.washington.edu/outreach/mas/water\_quality/onsite\_sewage\_treatment/proprietary.pdf

"Homeowner's Manual For the Operation, Monitoring, and Maintenance of a Sand Filter On-site Sewage Treatment and Disposal System" Washington Sea Grant PDF

http://www.wsg.washington.edu/outreach/mas/water\_quality/onsite\_sewage\_treatment/sand.pdf

"Homeowner's Onsite System Guide and Record Keeping Folder" – NOWRA (National Onsite Wastewater Recycling Association) http://www.nowra.org/files/NOWRA2005HomeownerFolder.pdf

"What Does Operation and Maintenance Consist of?" - Kitsap County: <a href="http://www.kitsapcountyhealth.com/environmenta\_health/oandm/o\_and\_m\_consistof.htm">http://www.kitsapcountyhealth.com/environmenta\_health/oandm/o\_and\_m\_consistof.htm</a>

"What is Operation & Maintenance?" - Kitsap County: <a href="http://www.kitsapcountyhealth.com/environmenta\_health/oandm/o\_and\_m\_whatis.htm">http://www.kitsapcountyhealth.com/environmenta\_health/oandm/o\_and\_m\_whatis.htm</a>

"Why Do I Need Operation & Maintenance" – NOWRA (National Onsite Wastewater Recycling Association)

<a href="http://www.kitsapcountyhealth.com/environmenta\_health/onsite/docs/brochure\_om.pdf">http://www.kitsapcountyhealth.com/environmenta\_health/onsite/docs/brochure\_om.pdf</a>

"Maintenance Questions – Frequently Asked Septic System Questions" – Thurston County http://www.co.thurston.wa.us/health/ehoss/FAQs maintain.html

"Septic Tank Maintenance Record" – Washington State Dept. of Ecology maintenance record with area to sketch system plot <a href="http://www.ecy.wa.gov/programs/wq/wqguide/record.html">http://www.ecy.wa.gov/programs/wq/wqguide/record.html</a>

"What To Expect During A Septic System First Maintenance Inspection" - PDF file from the University of Rhode Island Cooperative Extension

 $\frac{http://www.uri.edu/ce/wq/mtp/PDFs/SepticFactsheetslPDFs/1st\%20Main}{\%20inspection.pdf}$ 

"What To Expect During A Septic System Routine Maintenance Inspection" - good example of O&M brochure with pictures, PDF file from the University of Rhode Island Cooperative Extension <a href="http://www.uri.edu/ce/wq/mtp/PDFs/SepticFactsheetslPDFs/Routine%20">http://www.uri.edu/ce/wq/mtp/PDFs/SepticFactsheetslPDFs/Routine%20</a> Mainten.pdf

#### **Technical On-site Information**

"On-site Products and Systems Approved or Registered for Use in Washington State" – DOH, Wastewater Management Program <a href="http://www.doh.wa.gov/ehp/ts/WW/pubs-ww-products.htm">http://www.doh.wa.gov/ehp/ts/WW/pubs-ww-products.htm</a>

"On-site wastewater treatment How to get your license" – Washington State Department of Licensing http://www.dol.wa.gov/business/onsitewastewater/

"Recommended Standards and Guidance (RS&G), documents for performance, application, design, and operation & maintenance of on-site systems in Washington State" — DOH, Wastewater Management Program

http://www.doh.wa.gov/ehp/ts/WW/pubs-ww-rsg.htm

"Septic System Approval" – for systems in Jefferson County <a href="http://www.jeffersoncountypublichealth.org/index.php?id=169,233,0,0,1,0">http://www.jeffersoncountypublichealth.org/index.php?id=169,233,0,0,1,0</a>

**"Septic Systems: Information for Industry Professionals"** – U.S. EPA <a href="http://cfpub.epa.gov/owm/septic/industry.cfm">http://cfpub.epa.gov/owm/septic/industry.cfm</a>

"Septic System Programs Technology Fact Sheets" – U.S. EPA, links to many publications about on-site technology <a href="http://cfpub.epa.gov/owm/septic/publications.cfm?sort=name&view=doctype\_results&document\_type\_id=10">http://cfpub.epa.gov/owm/septic/publications.cfm?sort=name&view=doctype\_results&document\_type\_id=10</a>

"Technical and Reference Information about On-site Septic Systems" – DOH, Wastewater Management Program <a href="http://www.doh.wa.gov/ehp/ts/WW/pubs-ww-tech.htm">http://www.doh.wa.gov/ehp/ts/WW/pubs-ww-tech.htm</a>

"The Wastewater Information System Tool (TWIST)" – U.S. EPA, free on-site database management software <a href="http://cfpub.epa.gov/owm/septic/twist.cfm">http://cfpub.epa.gov/owm/septic/twist.cfm</a>

# Organizations with On-line Information about On-site Sewage Systems

- National Small Flows Clearinghouse (NSFC): http://www.nesc.wvu.edu/nsfc/nsfc\_index.htm
- National Onsite Wastewater Recycling Association (NOWRA): http://www.nowra.org
- U.S. Environmental Protection Agency (EPA): http://cfpub.epa.gov/owm/septic/home.cfm
- University Of Minnesota Extension: <a href="http://septic.umn.edu/">http://septic.umn.edu/</a>
- University of Rhode Island Cooperative Extension: http://www.uri.edu/ce/wq/owtc/html/owtc\_factsheets.htm
- Washington On-site Sewage Association (WOSSA): http://www.wossa.org
- Washington Sea Grant: <a href="http://www.wsg.washington.edu">http://www.wsg.washington.edu</a>,
- Washington State Department of Health (DOH): http://www.doh.wa.gov/ehp/ts/WW/default.htm
- Washington State University Extension program (WSU): <a href="http://ext.wsu.edu">http://ext.wsu.edu</a>